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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/779,580	02/13/2004	Masashi Takagi	4041K-000175	9307
27572	7590	08/10/2005	EXAMINER	
HARNESS, DICKEY & PIERCE, P.L.C. P.O. BOX 828 BLOOMFIELD HILLS, MI 48303			NGUYEN, HOANG M	
			ART UNIT	PAPER NUMBER
			3748	

DATE MAILED: 08/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No. 10/779,580	Applicant(s) TAKAGI, MASASHI	
	Examiner Hoang M. Nguyen	Art Unit 3748	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 June 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-9 and 12-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3-9, 12-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Applicant's amendment dated June 30, 2005, has been fully considered.

Applicant has amended the claims to include a new subject matter that "the control device stops the heating means at the time of starting the engine to drive the piston ONLY by the pressure gas" and argued that Svensson does not disclose that subject matter. Applicant's attempt to put this application in condition for allowance is greatly appreciated. However, please note this new subject matter is a new matter because the specification, as originally filed, discloses on page 15, lines 30-33 that the fuel in the expansion chamber 4 is ignited and burnt by the ignition device such as a spark plug. This concept is exactly the same as the engine in Svensson because the injection pump 70 in Svensson only operates during the power stroke that reads on the concept of "stopping the heating means if the engine is not operated". Therefore, this application is now rejected under 35 USC 112, 1st paragraph for introducing new matter, 35 USC 112, 2nd paragraph for claiming something different from the specification. Also, the rejection from the previous Office Action has been maintained.

Applicant is suggested to review the application again, and concentrate on the concept that this system use the ignition only to maintain the gas temperature from decreasing as set forth on page 15, lines 35-38 to put this application in condition for allowance.

This Office Action has been made final.

Claims 1, 3-9, 12-23 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The newly added concept "the control device stops the heating means at the time of starting the engine to drive the piston ONLY by the pressure gas" is not in the specification as originally filed. This is a new matter situation.

Claims 1, 3-9, 12-23, are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The newly added concept "the control device stops the heating means at the time of starting the engine to drive the piston ONLY by the pressure gas" is different from the concept in the specification and therefore is rejected as claiming something not in the specification.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3-4, 6-9, 12, 15, are rejected under 35 U.S.C. 102(b) as being anticipated by US 6138616 (Svensson).

Svensson discloses an engine comprising a compressed gas tank 15, a plurality of pistons inside cylinders 3, heating means including fuel from injection pump 70 and igniter. Regarding claim 4, it's well known air inherently has oxygen. Regarding claim 7, the exhaust gas from the engine is sucked and further compressed inside turbine 5. Regarding claims 8-9, because the engine is working in cycle, the cylinders repeatedly receive compressed air, expand, then discharge and go back to another cycle, that reads on claims 8-9.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5, 13, 14, are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. 6138616 (Svensson) in view of U.S. 3861367 (Kelmar). Svensson discloses all the claimed subject matter as set forth above, but does not disclose the oxidizing step, compressor working with an air conditioner. Kelmar is relied upon to disclose an engine comprising an oxidizer from oxygen tanks 20, air conditioner 35 with compressor 19 and compressed air tank 18. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to provide oxidizer in Svensson as taught by Kelmar for the purpose of improving the efficiency of the system, and using

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compressor with air conditioner in Svensson as taught by Kelmar for the purpose of achieving a cooling system.

Claims 16-23, are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. 6138616 (Svensson) in view of U.S. 5907950 (Enderle et al). Svensson discloses all the claimed subject matter as set forth above, but does not disclose the catalyst.

Enderle is relied upon to disclose an engine comprising a catalyst 36 at the exhaust of the engine. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to provide a catalyst in Svensson as taught by Enderle et al for the purpose of improving exhaust condition of the system. Regarding claims 19-23, the operating steps of these claims are simply the basic operation of the engine and the system.

Applicant's submission of the requirements for the joint research agreement prior art exclusion under 35 U.S.C. 103(c) on June 30, 2005, prompted the new ground(s) of rejection under 37 CFR 1.109(b) presented in this Office action. Accordingly, THIS ACTION IS MADE FINAL. See MPEP § 706.02(l)(3). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

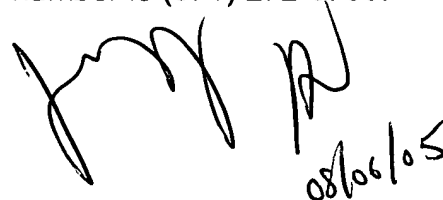
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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Examiner Nguyen whose telephone number is (571) 272-4861. The examiner can normally be reached on Tuesday--Friday from 12:30 AM to 10:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Denion, can be reached on (571)-272-4859. The fax phone number for the Examiner is (703) 872-9302 for regular communication, and (703) 872-9303 for after final communication.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (571) 272-3700.

Handwritten signature of Hoang Nguyen and the date 08/06/05.

HOANG NGUYEN
PRIMARY EXAMINER
ART UNIT 3748

Hoang Minh Nguyen
8/6/05